DOCUMENT RESUME

ED 320 046 CG 022 541

AUTHOR Jakobczuk, Maria Rose
TITLE Death of a Parent in Childhood and Adult Depression.
PUB DATE May 90
NOTE 49p.; Doctoral research paper, Biola University.
PUB TYPE Dissertations/Theses - Doctoral Dissertations (041) -- Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adults; *Childhood Needs; Children; *Death; *Depression (Psychology); *Emotional Adjustment; *Grief; *Parent Child Relationship

ABSTRACT

Studies investigating the association between death of a parent in childhood and risk of adult depression are reviewed. Some studies have found a positive association between childhood bereavement and adult depression while others have found either no association or mixed results. These inconsistent and conflicting findings are primarily due to methodological limitations such as poorly defined variables, errors in sample selection, and confounding variables. There are three possible explanations for the findings: (1) the positive association between childhood bereavement and adult depression may be highly specific depending on the type of loss, age at loss, gender of the child, and other variables; (2) negative findings may be accurate and there may be no substantive relationship between childhood bereavement and adult depression; and (3) childhood bereavement may have a weak effect upon risk of adult depression. Recommendations for future research are provided. Forty-two references are included. (Author/NB)

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ED320046

DEATH OF A PARENT IN CHILDHOOD AND ADULT DEPRESSION

A Doctoral Research Paper Presented to
the Faculty of the Rosemead School of Psychology
Biola University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Psychology

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by
Maria Rose Jakobczuk
May 1990

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DEATH OF A PARENT IN CHILDHOOD AND ADULT DEPRESSION

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ABSTRACT

DEATH OF A PARENT IN CHILDHOOD AND ADULT DEPRESSION

by

Maria Rose Jakobczuk

Studies investigating the association between death of a parent in childhood and risk of adult depression are reviewed. While some studies have found a positive association between childhood bereavement and adult depression, others have found either no association or mixed results. These inconsistent and conflicting findings are primarily due to methodological limitations such as poorly defined variables, errors in sample selection and confounding variables. There are three possible explanations for the findings. The positive association between childhood bereavement and adult depression may be highly specific depending on type of loss, age at loss, sex of the child and other variables. The opposing conclusion is that the negative findings are accurate and there is no substantive relationship between childhood bereavement and adult depression. A third explanation may be that childhood bereavement has a weak effect upon risk of adult depression. Recommendations for future research are provided.

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ACKNOWLEDGEMENTS

I wish to express my gratitude to Dr. Patricia Pike for her input and guidance, to Dr. William Worden for his willingness to share his expertise in the area of bereavement, and to Dr. William Hunter for his assistance with the formating of the manuscript.

My deepest thanks to Gil for his invaluable input, his patience, for being the "good enough" soothing object throughout the writing of this paper, and most of all, for the use of his computer. My appreciation extends to Judy, Nicky, and Greg for their friendship, support, and encouragement. Finally, I wish to thank my family for believing in me, for their love and for their never ending support.

God, you made all this possible--thank you.

Death of a Parent in Childhood and Adult Depression

Introduction

Freud (1917/1957) in "Mourning and Meloncholia" was the first to examine the relationship between loss of a love object and depression. Abraham (1927/1968) followed with the observation that depression was derived from "disagreeable" childhood experiences. Both of these views stimulated a great deal of interest and laid down the groundwork for subsequent research in the area of childhood loss.

Since a parent is a child's most obvious love object, writers began to focus their attention on children who had experienced the loss of a parent through death. They observed that most children denied the finality of the loss as evidenced by the absence of sadness, little crying and the lack of disruption of everyday activities. Thus the consensus was reached that mourning did not occur in children (Deutsch, 1937; Fleming & Altschul, 1963; Wolfenstein, 1966). It was believed that the process of mourning required tolerating painful affects and demands for reality testing in the face of powerful wishes and fantasies. However, since the ego of the child was "not sufficiently developed to bear the strain of the work of mourning . . . it therefore utilize[d] some mechanism of . . . self protection to circumvent the process" (Deutsch, 1937, p. 228). The child's inability to successfully complete the mourning process was thought to lead to various forms of pathology in adulthood.

Bowlby (1963) supported this view and concluded that early loss could sensitize an individual and make him or her more vulnerable to loss or the threat of loss in adulthood:

> Many of the features that are characteristic of one or another variant of pathological mourning in adults are found to be almost the rule in the ordinary mourning responses of young children . . What appears to have happened is that processes of mourning, having been evoked in early childhood, took a pathological turn in a way typical of them in that period of life; and that, over the years, the pathological processes have either persisted unchanged, or having temporarily modified, have been evoked afresh by a further loss. (pp. 521, 539)

These conclusions were based primarily on clinical observations. Empirical studies were then undertaken to determine if indeed there was a causal relationship between loss of a parent in childhood and adult depression. However, most of the early studies were plagued with methodological flaws. The predominant method of testing the hypothesis was to compare the incidence of childhood loss in a depressed population with that of a control group. If depressed patients showed a higher incidence of loss, this was interpreted as evidence to support the conclusion that loss in childhood predisposes an individual to depression.

Some reviewers of the literature have challenged this assumption (Tennant, Bebbington, & Hurry,1980). Crook and Elliot (1980) concluded that "parental death during childhood has not been established as a factor of etiologic significance in adult depression or any subtype of adult depression studied to date" (p. 252). Heinicke (1973), Lloyd (1980) and Finkelstein (1988) reported that the evidence supports the view that an association exists between loss of

a parent in childhood and adult depression, particularly severe forms of depression.

These conflicting viewpoints regarding childhood bereavement and adult depression arise out of differing and inadequate methodology. For instance, the definition of loss varies across studies and makes comparisons between them difficult. Loss has variously included poor parenting, deprivation, child-abuse, parent-child separations and parental death. This review will be limited to studies that define loss as the death of a parent--an event which is objectively and easily defined and involves minimal error in recall. Studies of loss other than through death are excluded from this review. Several studies have shown loss to be associated with psychiatric illnesses other than depression. However, this paper will focus on only those controlled studies that specifically relate death of a parent to depression. Furthermore, only those studies which present data, and which compare the experimental group with a control sample will be reviewed. Since this review is concerned with the long term effects of childhood bereavement, studies which examine the immediate reaction and effect on children of parental death will not be discussed.

Death of a Parent and Risk of Adult Depression

In reviewing the literature, it soon becomes apparent that there are several contradictory views concerning the relationship between childhood bereavement and adult depression. Although the majority of studies indicate a positive association between death of a parent in

childhood and adult depression there are also studies that disconfirm any such relationship. Finally, some studies suggest that although childhood bereavement and adult depression are related, this association is highly specific.

Positive Findings

Numerous studies suggest an association between early parental death and adult depression. Birtchnell (1972) found that the adult psychiatric illness most positively associated with loss of a parent in childhood was depression. Although the sex of the deceased parent did not seem to matter, females seemed to be more affected by the loss than males. The most critical age for bereavement was before the age of 10 years.

Birtchnell's (1972) results were obtained by dividing a sample of 6,795 patients, referred to the psychiatric services of the North-Eastern Region of Scotland, into five diagnostic categories: depressives, neurotics other than depressive, psychotics other than depressive, alcoholics and personality disorders. The diagnosis was taken as the last one available in the case records. The control sample (4,000) was obtained by mailing surveys to the local general population. Although not precisely matched, the control group subjects were comparable in age and sex distribution to the psychiatric sample. Birtchnell observed a significant variation in the decade of birth distribution of the five diagnostic groups, and noted that the incidence of early bereavement changes with decade of birth. Once this was controlled for, it became clear that losing a parent was not a significant factor in either the neurotics or the

psychotics. However, depression was one of the diagnoses most significantly associated with early bereavement. Birtchnell's results supported the conclusions that had been reached by researchers in earlier studies.

One such study was conducted by Brown (1961) in England. He reported that losing a parent in childhood was one of the most significant factors in the development of depression in adulthood. He proposed that adult depressive illness was triggered by minor rejections, which reactivated the apparently recovered depression of childhood.

Brown (1961) reached this conclusion by studying the incidence of bereavement in childhood in 216 depressed outpatients. Two forms of control were utilized: the 1921 orphanhood tables from the 1921 Census as well as 267 medical patients. The incidence of childhood bereavement was significantly higher in the depressive patients than in both the general population and the medical patients. A greater percentage of the depressed outpatients (41%) had experienced loss of at least one parent before the age of 15 years, compared with 12% from the Census, and 19.6% from the medical patients. Losing a father in the age groups 5-9 and 10-14 was most significant, while loss of mothers was equally significant in each five-year period of childhood.

Although the results support Brown's conclusion, that childhood bereavement is a significant factor in the development of adult depression, they need to be evaluated in light of the methodological flaws. For instance, one of the difficulties of his study is the lack of

a clear and objective criteria of assigning a diagnosis. Brown defined depressive illness as simply chronic, unpleasant affect. Furthermore, he failed to differentiate between the different subtypes of depression. Additional problems include using a nonrepresentative population of depressed subjects since the depression was more acute than chronic and using medical patients as controls since they too may be depressed and may not be a representative group of the general population. Furthermore, the comparison groups were not matched for age nor for other demographic variables.

In addition, patients who had lost a parent, but who did not know whether it was due to death, were included in the study. This may blur the distinction between the experimental and the control groups, since families where the parent left the home may have been less stable. Thus the depression may be due to poor family relationships rather than the loss itself. Also, the cause of death was not recorded. Children who lost a parent by suicide may have had a severely depressed parent, thus depression in later life may be genetically based or may be related to having been raised in a home with a parent who was mentally ill.

In an attempt to replicate Brown's (1961) findings, Hill and Price (1967) compared the incidence of childhood bereavement in 1,483 depressed patients with 1,059 nondepressed patients. The depressed group consisted of first psychiatric admission patients whose diagnoses on case summary reports included a depressive label (melancholia, affective disorder, grief reaction, depressive reaction). All other patients who did not fit in this large category

were assigned to the nondepressed group. A significantly higher number of depressed patients had lost their fathers between birth-14 years of age than the nondepressed group. The incidence of maternal loss was not different between the two groups. Girls who had lost a father at the ages of 10-14 years seemed to be most vulnerable to adult depression.

Although their findings seem to approximate Brown's (1961), Hill and Price (1967) failed to address the methodological problems inherent in Brown's research. For instance, the problem of diagnosis was largely ignored. Their sample consisted of an inpatient population, which would tend to have more severe pathology than Brown's sample. Furthermore, using psychiatric patients for a control group is far from ideal since they too may have depressive symptomatology. Although an attempt was made to control for ethnic origin and year of birth, social class was not controlled. Lower socioeconomic status has been shown to increase the risk of adult psychopathology (Dennehy, 1966) thus if this variable is not controlled, it may be difficult to determine whether the bereavement or the socioeconomic status is associated with depression.

Contrary to Brown's (1961) belief that it was impractical and unnecessary to look at the different subtypes of depression, others (Forrest, Fraser, & Priest, 1965; Hopkinson & Reed, 1966) stressed the need to differentiate among depressive illnesses. Gay and Tonge (1967) studied the relationship between childhood bereavement and two different types of depression. They hypothesized that data collected from outpatients will contain a higher percentage of

reactive (neurotic) depression, and it is this type of sample that did show the highest incidence of childhood bereavement. Psychiatric inpatients with endogenous (psychotic) depression, such as the ones in their study, did not show an excess of parental loss. Their results confirmed that death of a parent in childhood was associated with a subtype of depression (reactive) in adulthood.

A total of 494 patients were studied; of these 136 reported some form of separation from a parent, for at least six months duration, before the age of 15. Of these 136 patients, only 73 (i.e. , 15% of the total population) lost a parent through death. The remaining 358 patients with no history of separation were used as the comparison group. These two groups were then compared with respect to the following diagnoses: endogenous depression, reactive depression, neurosis, schizophrenia, and personality disorder.

Unfortunately, Gay and Tonge's (1967) study poses several problems. No standardized assessment was used to differentiate reactive from endogenous depression. In addition, the groups were not matched for demographic variables. As a result, the two groups may differ in other ways besides bereavement, and these other differences may account for the depression. Thus, although Gay and Tonge show the importance of treating the various types of depression separately, their conclusions have limitations.

Barnes and Prosen (1985) found that death of a father in childhood was associated with adult depression. Unlike most other studies, their entire sample consisted of general practitioners' patients, rather than psychiatric patients. The Centre for

Epidemiological Studies Depression Scale (CES-D) was administered to 1,250 patients. The subjects were also asked to indicate whether they had lost a mother or father by death and their age when this loss occurred. In an effort to avoid many of the methodological problems of previous research studies, Barnes and Prosen (a) obtained a large sample size, (b) used a standardized self-report measure of depression, (c) obtained all subjects (depressed and nondepressed) in the same manner, (d) measured the age of the child at the time of the parent's death, and (e) controlled for the possible confounding effects of other demographic factors by using multivariate data analyses.

Although loss of a father was found to be significantly associated with depression, mother loss was not. The highest depression scores occurred for subjects in groups who had lost a father from birth-6 and 10-15 age ranges. These results are almost identical to those of Brown (1961) and Hill and Price (1967), who found that losing a father before a child's 14th birthday was associated with adult depression.

The depression scores were highest in patients who came from one part of town compared to another; who were female rather than male; unemployed versus not unemployed; divorced or separated versus not divorced or separated; and who had lost a father from birth-6 or 10-15 age level. Once the data analysis was completed, the predictors of depression in order of magnitude were employment status, father loss, marital status, city and sex. Multiple classification analysis procedures were used to determine whether the effect of

father loss would remain when these demographic variables were controlled. The results indicated that the father loss effect remained virtually unchanged and that the demographic variables could not account for the significant association between father loss and depression.

Theories that link early parental loss to later depression usually emphasize the importance of the loss of a significant attachment figure for further psychological development. Since mother is a stronger attachment figure than father for most children, the significant association between death of a father, rather than a mother, and adult depression is an odd finding. This indicates that a more complex phenomenon exists than merely a causal relationship between bereavement and depression. Although the results obtained by Barnes and Prosen (1985) indicate an association between early bereavement and adult depression, they could have been produced by some other confounding variable(s) which may have been overlooked. For instance, the patient's family of origin socioeconomic status was not measured directly, nor was the parent's age at the time of the subject's birth considered. Since some argue that these factors may also contribute to adult depression, they need to be considered conjointly with bereavement (Dennehy, 1966; Moran,1968).

Using the two sets of control data provided by Brown (1961), the orphanhood tables of 1921 Census and 267 medical patients, Munro and Griffiths (1969) studied 364 psychiatric inpatients and outpatients; of these, 162 were diagnosed with depression. The

depressed inpatients had experienced a higher number of maternal deaths prior to their 15th birthday than the depressed outpatients. This contradicts Hill and Price (1967) and Barnes and Prosen's (1985) finding that paternal, rather than maternal, deaths seemed to be associated with depression. It was also noted that the outpatient depressives did not differ significantly from the normal group. Moreover, this bereavement did not seem to occur at a specific stage of childhood, unlike the depressed inpatients. However, other studies have found that the child's age at the time of bereavement was a predisposing factor to adult depression (Birtchnell, 1972; Brown, 1961; Hill & Price, 1967).

Dennehy (1966) found that both maternal and paternal death were associated with adult depression. She emphasized the importance of having good control groups and presented evidence that studies of bereavement need to control for the year of birth or the parental age at birth. A sample of 1,020 patients were interviewed, and the diagnosis was that which was given by the Consultant in charge of the case. Patients diagnosed with involutional melancholia, depression, agitated depression, manic depressive psychosis (both manic and depressive phases), and reactive depression were collectively included in the depressed group. The sample, drawn from three hospitals in London, England, was compared to the 1921 Census.

Dennehy found that there was a significantly higher incidence of paternal death in combined male and female depressives. When the 1921 Census was used to compare the rate of maternal loss to

paternal loss, it was found that male depressives had a significantly higher incidence of maternal than paternal loss, and female depressives evidenced more paternal than maternal loss. When age at loss was considered, Dennehy found that a significant number of these depressed patients had suffered the loss of a parent when the patients were between the ages of 10-15 years.

Studies to this point suggest that there appears to be a relationship between parental death prior to 15 years of age and depression in adulthood. Although the specifics of this relationship are difficult to decipher from current research, there is some indication that there are some specific associations that may be of interest. Sex of the deceased parent, sex of the child, and age at the time of loss all seem to impact the relationship between bereavement and adult depression. While some studies find that paternal death is associated with depression (Hill & Price, 1967), others find that maternal death is associated with depression (Munro & Griffith, 1969). When the sex of the deceased parent and sex of the bereaved child is considered, the relationship between bereavement and depression becomes complex. Some say paternal death is more difficult for girls than boys (Barnes & Prosen, 1985), while maternal death is more difficult for boys than girls (Dennehy, 1966). However, all these studies have demonstrated some positive relationship between early parental death and adult depression.

Not only have studies found a positive relationship between childhood bereavement and adult depression, some have found that this bereavement may influence the severity of depression. Many

studies have found that psychiatric patients and subjects diagnosed as severely depressed have a significantly higher incidence of early parental death than comparison groups of moderately, mildly, or nondepressed subjects.

Beck, Sethi and Tuthill (1963) were the first to observe a significant association between early death of a parent and severity of depressive illness. In an attempt to objectively determine psychiatric diagnoses, the Depression Inventory was administered to 297 inpatients and outpatients. Clinical ratings of the severity of depression, irrespective of diagnosis, was an additional measure of depression. Nondepressed psychiatric patients were used as a control group. The entire patient sample was divided into three groups based on scores on the Depression Inventory, and comparisons were made between the highly depressed, moderately depressed and nondepressed groups. Of the 100 patients in the highly depressed group, 27% lost a parent before the age of 16, compared with 12% in the nondepressed group. The difference between these two groups was highly significant.

When the depth of depression was considered, it was found that the highly depressed patients showed a significantly higher incidence of parental death (36.4%) than the patients in the nondepressed group (15.2%). Although not statistically significant, there was an over-representation of childhood bereavement before the age of 4 in the highly depressed group as compared with the nondepressed group. For both males and females, loss of a father occurred more frequently than loss of mother; this finding held for both sexes across

all levels of depression. Furthermore, death of a father was over-represented in the highly depressed group for both sexes. The association between loss of a father in childhood and adult depression has been reported by others (Barnes & Prosen, 1985; Brown, 1961; Dennehy,1966; Hill & Price, 1967). However, it contradicts Munro and Griffith's (1969) study which reported maternally bereaved children to be most vulnerable to adult depression.

In analyzing the data, Beck et al. (1963) attempted to control for the influence of such background variables as age, race, and sex. Although there was a higher incidence of bereavement in depressed patients in the older age groups, they found that the factor of age did not account for the obtained relationship between orphanhood and depression. One of the interesting findings was that the overall incidence of bereavement in childhood was significantly higher in the Black than in the Caucasian groups. This emphasizes the necessity of using methods for controlling background variables.

Studies using the MMPI also lend support to the view that severity of depression and death of a parent in childhood are related. Wilson, Alltop and Buffaloe (1967) analyzed MMPI profiles according to the presence or absence of childhood bereavement. Of the 92 depressed patients, 28 had lost a parent before the age of 16 years. The nonbereaved group showed a neurotic profile [elevated scales 1(Hs), 2(D), 3(Hy)], while the bereaved group displayed a psychotic profile [elevated scales 6(Pa), 7(Pt), 8(Sc), 9(Ma)] . Those who were

maternally bereaved had significantly higher scores on all the basic scales except scale 5(Mf) than did the paternally bereaved group.

Since Wilson et al. (1967) did not consider the possible differences in age distribution between the comparison groups, Birtchnell (1978) replicated Wilson et al.'s study in Scotland with improved methodology. Birtchnell's study differed in several ways. He considered only childhood bereavement occurring between ages birth-9. To maintain a clear contrast between the bereaved and non-bereaved groups, both parents in the latter group had to have remained alive until the patient was at least 25 years. In addition, all groups were matched by sex and age. These controls were utilized to rule out the effects of sex, age of the child at bereavement, and other types of loss (e.g., divorce, separation) in precipitating adult depression.

The mean scores of 29 early bereaved depressed patients were compared with those of 58 depressed patients who were not bereaved early. The bereaved patients had the higher mean scores on all scales of the MMPI. Birtchnell's (1978) findings were in partial agreement with Wilson et al. (1967) and lend support to the view that early death of a parent tends to elevate the scores on the clinical scales of the MMPI in a depressed population.

Hill (1969) reasoned that patients who attempted suicide would show severe depression, the suicide attempt being a consequence of the severity of the depression. He studied a group of 1,483 depressed inpatients, in England, to determine whether there was a relationship between loss of a parent in childhood and a subsequent

suicide attempt in adulthood. He found that depressed women who lost their fathers when aged 10-14 and, to a lesser extent, at 15-19 were significantly more likely than depressed nonbereaved women to attempt suicide. Men and women who lost a mother in the first 10 years of life also tended to attempt suicide more often than those who had not experienced the loss of a parent.

Birtchnell (1970b), in Scotland, also found that the incidence of childhood bereavement was highest in severely depressed suicidal patients. Patients who had attempted suicide were matched for age and sex with nonsuicidal patients. Birtchnell reported that 39% of the severely depressed patients had attempted suicide, compared with 24.5% of the moderately depressed and 10.8% of the nondepressed. This contradicts Hill's (1969) assumption that all suicidal individuals are severely depressed. The incidence of parental death, occurring between ages 10-19, was greatest among severely depressed suicidal patients. Birtchnell concluded that having a parent die in childhood contributes to the severity of depression and to suicide attempts.

Although different methods of research have been utilized and various population groups have been studied, the results reviewed to this point have consistently shown that death of a parent in childhood is significantly associated with adult depression. Sex of the deceased parent, as well as the age at which the loss occurred seem to be two of the most significant variables associated with adult depression. Children who have lost a father, specifically between birth-15 years of age, seem to be most vulnerable to developing

depression in adulthood. Several studies found that it was mother, and not father deaths occurring before the 15th birthday that was associated with adult depression.

Some studies have also shown that an association exists between childhood bereavement and the severity of depression in adulthood. Of course association does not imply causation, nor can the methodological limitations of these studies be ignored. Not only can it not be proven that death of a parent in childhood causes adult depression, the percentages (a) do not show how many bereavements do not lead to depression, (b) do indicate that some bereavements do not lead to depression (i. e. , there is a percentage of the comparison sample which is also depressed in each study), and (c) do show that depression is usually not related to bereavement since a large percentage (60%-80%) of depressed people were not bereaved in childhood.

Negative Findings

Several studies have found no association between childhood bereavement and adult depression. Munro (1966) concluded that adult depression was unrelated to death of a parent in childhood. He examined the incidence of parental death in childhood in a group of 153 depressed inpatients and 163 medical inpatients in England. The groups did not differ on incidence of either maternal or paternal death (21.6% in depressives vs. 20.2% in controls).

Childhood deprivation experiences, defined as the "lack, loss or absence of an emotionally sustaining relationship prior to adolescence," was the focus of Jacobson, Fasman and Dimascio's

(1975, p. 5) study. Death of a parent was one of the deprivation experiences examined. A group of 659 women were divided into three groups: 347 depressed neurotic and psychotic inpatients, 198 normal women who were not receiving psychiatric care, and 114 neurotic, depressed outpatient women. The incidence of childhood bereavement was low in all three groups. Furthermore, death of a parent did not occur disproportionately among either of the depressed groups in comparison to the normals. There was a stronger relationship between childhood deprivation experiences and adult depression than childhood bereavement and adult depression.

Some of the limitations of this study were that groups differed in marital status. The age of the child at the time of loss, the decade of birth, and the sex of the deceased parent were also not considered. Furthermore, the diagnosis of depression was not objectively measured. Because these variables were not considered, the negative finding may have suppressed any type of significant association. These limitations are important to consider since bereavement and adult depression are a complex phenomena whereby a number of variables can modify or confound the association.

Ragan and McGlashan (1986) proposed that although death of a parent in childhood can have a negative impact, it does not singularly cause adult severe psychopathology. Nor does it seem to play a role in determining a specific diagnosis of mental illness, such as depression. They studied 72 severely ill psychiatric inpatients who had lost one or both parents before the age of 18. This group

was compared to patients who had not experienced the death of a parent. Death of a parent did not seem to be linked to a specific category of later psychopathology. This directly contradicts Birtchnell's (1972) finding. Although childhood bereavement may not cause specific pathology, it may influence its severity and extent. Patients who had lost a parent in childhood had a higher incidence of family pathology, impaired heterosexual and interpersonal relationships and more severe levels of pathology--regardless of diagnosis. This concurs with Munro's (1966) observation that while childhood bereavement is not associated with adult depression, if the depression occurs, it will be more severe.

Pitts, Meyer, Brooks, and Winokur (1965) compared the incidence of parental death prior to age 15 in a group of 366 depressed inpatients with 180 medical inpatients. The different subtypes of depression were not considered separately since the depressed group consisted of patients diagnosed manic-depressive, psychotic depressive reaction, involutional psychotic reaction and depressive reaction. The groups were matched for age, sex, marital status and social class. Pitts et al. found that the incidence of childhood bereavement was similar in both groups.

Several studies were undertaken that focused on a specific subtype of depressive illness. In a relatively well designed study, Roy (1983) looked at a group of 300 psychiatric patients with a neurotic depressive episode. Those diagnosed with manic-depression, psychotic depression, endogenous depression (melancholia in DSM III) or depression secondary to other

psychiatric diagnoses, were excluded. All patients came from the same geographical area and were matched for age, sex, marital status and social class with 300 nondepressed and never depressed gynecological and orthopedic patients. Additional strengths of this study are the following: Potential controls were screened for depression and those with current or past depressive illness were excluded; loss of mother and father were examined separately; the patient's age at time of loss was considered; death of parent by suicide was recorded; and a log-linear analysis was used to analyze the results.

There was no significant association between loss of a mother or father at any age and neurotic depression in adult psychiatric patients of either sex. Although there was a higher incidence of childhood bereavement in depressed patients compared to the control sample, it was not to a statistically significant degree. Since other types of depressive disorders were not considered, the results of this study apply only to that subgroup of patients with neurotic depression, and cannot be generalized to all types of patients with depressive disorders.

Hopkinson and Reed (1966), in England, considered another subtype of depression, manic-depressive psychosis, and failed to find an association between childhood bereavement and manic-depressive psychosis. They studied the incidence of childhood bereavement in 200 inpatients suffering from manic-depressive psychosis and compared them with Brown's (1961) figures for his depressed patients and normal controls. The major differentiating

factor between Hopkinson and Reed's selection sample and Brown's patient group was that the former was composed of manic-depressives, whereas the latter suffered from depressed mood (undifferentiated depression). Hopkinson and Reed found that the incidence of childhood bereavement in the manic-depressive group did not differ significantly from Brown's control group. Thus indicating that loss of a parent in childhood is not more likely in manic-depressive patients than it is for the general population. Since Brown obtained significant positive result, this also suggests that manic-depressive illness appears to be a clinically different syndrome than undifferentiated depression.

Hopkinson and Reed (1966) concluded that loss of a parent in childhood cannot be implicated in the etiology of manic-depressive psychosis. They proposed that the difference in the two studies was attributed to the differences in diagnostic criteria. In fact, their findings contradict Brown's theoretical position which stated that depression did not need to be differentiated.

Several studies have failed to show a relationship between childhood bereavement and adult depression. Even when specific sub-types of depression, such as neurotic and manic-depressive psychosis were studied, the results indicated that childhood bereavement could not be implicated in the etiology of these types of depression. Some authors (Munro, 1966; Ragan & McGlashan, 1986) add that although childhood bereavement may not be linked with a specific psychiatric illness, such as depression, it may influence its severity and extent if it occurs.

Mixed Findings

Each of the studies reviewed thus far have found either a positive association or no association between childhood bereavement and adult depression. There are also studies which report mixed results. Forrest, Fraser and Priest (1965) compared a total of 158 outpatient and inpatient depressive patients with 58 control medical patients. Forrest et al. found that 35.1% of the depressed patients had experienced death of a parent before the age of 15, compared to 17.2% for the control group. The difference was statistically significant. When the manic-depressives were examined separately it became evident that the manic-depressive group differed significantly from both the control and depressed patients by the absence of childhood bereavement. Although it was a small group (11 of 158 patients), none of the manic-depressives had experienced childhood bereavement.

Several other studies have also presented mixed results. For instance, Birtchnell (1970a) observed that loss of a parent in childhood was equally common in depressed patients and nondepressed patients. He found that 28% of the depressed patients, and 30% of non-depressed patients experienced death of a parent in childhood. However, when he compared the severely depressed and moderately depressed patients, he found that the incidence of early bereavement was significantly higher in the severely depressed group. Thus, childhood bereavement may affect the severity of depression, if it occurs, rather than the onset of depression.

Birtchnell's 1980 study is also confusing. Drawing upon a population of 6,795 psychiatric patients, in Scotland, Birtchnell examined the case records of 160 women who were maternally bereaved before the age of 11 years. The control group, 80 women with no experience of parental bereavement before the age of 26, was randomly selected from the remainder of the original population. The groups were matched by decade of birth. No differences emerged between the bereaved and the control groups when compared for endogenous and neurotic types of depression. However, a rather unexpected result was obtained when the severity of depression was assessed for both groups. The control group was more depressed than the bereaved sample. This finding contradicts Birtchnell's previous studies (Birtchnell, 1970a, 1978) in which a significant relationship between early parent death and severity of depression was reported. What is more surprising is that the same rating scale was used as in the 1970a study.

The most obvious limitation of Birtchnell's (1980) study was utilization of case records to determine diagnostic classification. Case records may have lacked sufficient information to confidently determine a diagnosis, let alone the severity of depression. As a result, diagnoses were not objectively measured and may have reflected inaccurate symptomatology.

Unlike other studies in which depressed subjects were compared to nondepressed subjects for the incidence of bereavement, Breir, Kelsie, Kirwin, Beller, Wolkowitz and Pickar (1988) examined the predictive factors relevant to the development of psychopathology in

adults who were bereaved as children. They studied 90 adults, selected from the general population, who experienced parental loss as children. The results indicated that the strongest predictor of adult psychiatric illness was the quality of childhood adjustment to parental loss. In other words, children who adjusted poorly to the bereavement were more likely to develop later psychopathology than children who adjusted adequately. Other early loss factors, such as age at loss, type of loss, and sex of the separated parent, were not predictive of the development of adult psychopathology. The authors concluded that " early parental loss alone is not predictive of adult psychopathology. However, the occurrence of loss followed by increased affective symptoms in the context of a nonsupportive relationship with the surviving parent is related to the development of psychopathology" (p. 992).

Inconsistent and contradictory findings have been reported within studies. For instance, while depressed patients experienced childhood bereavement, none of the manic-depressives had experienced death of a parent in childhood (Forrest et al., 1965). Thus, childhood bereavement may be related to a specific subtype of depression in adulthood. Meanwhile, another study reported that both depressed (i.e., moderately and severely depressed) and non-depressed groups of patients had experienced a similar incidence of childhood bereavement, with the highest incidence of childhood bereavement in the severely depressed group (Birtchnell, 1970a). One study found that the control group was more depressed than the bereaved sample (Birtchnell, 1980). Finally, it has been shown that

the quality of home life subsequent to parental loss, rather than the loss alone, is critically related to adult psychopathology (Breir et al., 1988). The conflicting results within these studies suggest that childhood bereavement may have a weak or highly specific effect on the development of depression later in life.

Methodological Issues

The studies reviewed thus far have presented positive, negative, and mixed findings regarding the relationship between childhood bereavement and adult depression. The reliability and validity of these studies are directly influenced by the quality of the research. Many of the studies examining the long term effects of death of a parent in childhood are methodologically inadequate. Poorly designed studies may yield unreliable results and lead to questionable conclusions. In fact, the inconsistent findings in this area are largely attributed to methodological flaws such as inadequately defined variables under investigation, errors in sample selection, and possible confounding or modifying variables.

Defining Variables

One of the difficulties associated with this type of research is operationalizing the independent and dependent variables under investigation. In the study of childhood bereavement and adult depression, depression and bereavement are often inadequately defined. For instance, a uniform diagnostic criteria for depression is usually lacking. The diagnosis used in many of the studies is frequently derived by retrospectively examining the case records of

different psychiatrists or is based solely on clinical judgment. As a result, diagnoses, though clinically relevant, may not be objectively documented so as to be operational for research purposes. An additional problem of utilizing the diagnosis in the case records at face value is that some inpatients may have been diagnosed as depressed for insurance purposes or to avoid more stigmatizing diagnostic labels. Diagnoses of record thus may not reflect symptomatology accurately.

Besides the lack of uniform criteria for defining depression, some studies fail to discriminate between the different subtypes of depression. This makes comparisons between studies difficult. Thus, although the evidence indicates that depression should be categorized (Forrest et al., 1965; Gay & Tonge, 1967; Hopkinson & Reed, 1966), different types of depression are usually not considered separately.

Another problem has been that few studies consider the cause of parental death. For instance, subjects whose parents have committed suicide (i.e., whose parents suffered severe depression) may have a genetic predisposition to depression. Furthermore, children whose parents died suddenly (e.g., in an automobile accident) may be affected differently than children whose parents died after a lengthy illness.

Sample Selection

Not only has it been difficult to define the variables under investigation, most of the studies are biased in the selection of subjects. Frequently, subjects have been selected on the basis of

accessability rather than usefulness in representing the population of depressed or bereaved individuals. Most of the studies have used only psychiatric inpatients and/or outpatients as the experimental group. The utilization of services determines which subjects, of all those in the general population who have a symptomatic disorder, become psychiatric patients. Since most studies focus only on subjects who are in contact with psychiatric services, it becomes impossible to distinguish between the two separate variables. Furthermore, focusing specifically on psychiatric patients excludes the general population, where there may be a higher percentage of adults who have lost a parent in childhood. Thus, it is difficult to determine whether death of a parent in childhood causes (a) symptomatic disorder, (b) utilization of services, (c) both disorder and utilization, or (d) neither of the two (Tennant, Smith, Bebbington & Hurry, 1980).

The subjects in these studies have been compared to a variety of control groups. The most commonly used control groups have been medical patients, the general population (community samples), psychiatric patients and Census data.

The limitation with using medical patients in a control group is that they may also be depressed, obscuring the differences between the control and experimental samples (Dennehy, 1966). A measure of depression in both groups would be a good precaution to verify the difference between the groups. However, few studies have included such verification. A weakness with comparing the incidence of parental loss in different psychiatric populations is that

this may be determining which psychiatric diagnoses are more likely to be associated with childhood bereavement rather than whether childhood bereavement predisposes one to a particular diagnosis (Tennant et al., 1980). In other words, it does not follow that because child bereavement is more common with depressive symptomotology, bereavement leads to depression. The data only point to the high incidence of childhood bereavement in depressives in comparison to other psychiatric groups. The use of Census data can provide a good approximation of a general population for a control sample, however, the figures reported in the Census may slightly underestimate the incidence of parental deaths. This may occur because of under-reporting in cases where there may have been remarriage; and some children in each age group may be expected to be bereaved after the date of the Census and before their birthday, whereas any adult population has been exposed to the full risk over the whole number of years (Dennehy, 1966). Thus, each of these control groups poses its own problems.

It is interesting to note that the majority of the research attempts to look at the incidence of childhood bereavement in a depressed group, rather than looking at a sample of adults bereaved as children and then assessing for depression. Studies fail to account for those who experienced bereavement yet are not depressed. There is an overemphasis on relating childhood bereavement to depression while ignoring bereaved individuals who are not depressed. If research focused on bereavement rather than

depression, these nondepressed, bereaved individuals could be investigated.

Confounding Variables and Factors Modifying Outcome

When childhood bereavement, (the first variable), and adult depression, (the second variable), are associated with a variable, such as age at time of parent loss (third variable), the latter can act in one of three ways. It may act as a confounding variable by producing a spurious relationship between childhood bereavement and adult depression; it may interact with bereavement and depression; or it may alone account for adult depression. It is very difficult and complicated to assess what role a third variable has in the association between childhood bereavement and adult depression (Tennant et al., 1980); there are likely to be multiple such variables involved in this process. The following variables illustrate the difficulty in determining whether childhood bereavement predisposes one to the development of depression in later years.

Parent age at time of subject's birth. One of the variables that needs to be considered is the parent's age at the time of the subject's birth. Some argue that children with older parents are more likely to be predisposed to psychiatric illness later in life (Goodman, 1957; Norton, 1952). In other words, children who have older parents are more likely to be depressed as adults. For instance, Moran (1968) reported that both age of the parent and death of the parent appear to be separate explanatory variables for adult psychiatric morbidity. There is some indication for the need to control for the parent's age

since it may account for depression in the bereaved child as he or she gets older.

Ordinal position. Family size and ordinal position of siblings may also be important variables. Although the evidence is far from clear, it appears that ordinal position may influence the association of death of a parent in childhood and adult depression. Munro (1966) found middle children to be at greater risk. Birtchnell (1971), on the other hand, reported that a child with an older sibling of the same sex as the deceased parent had a lower risk of adult depression, however that elder sibling was at higher risk. Because children who come from large families tend to have a larger support system than children from small families, their adjustment to the loss may be easier.

Subject's year of birth and age. The subject's age at the time of loss needs to be considered. There does not seem to be a consensus about children of any one age being especially at risk for adult depression. Birtchnell (1972) found that patients who had lost a parent before the age of 10 were most vulnerable to adult depression, while Hill (1969) found the ages between 10 and 14 to be significantly correlated with depression. Furthermore, since the rate of development among children varies dramatically, it is difficult to determine how each one will be affected. A child of 4 years is very different cognitively and emotionally from a 10 or 15 year old. Thus the younger child may lack the capacity to understand and resolve the death of a parent, making him or her more vulnerable to adult depression.

It is important to examine the subject's year of birth, since mortality rates change throughout different time periods. For instance, children who were born during World War II may have experienced a high rate of bereavement. This experience may have been more common with peers and adults making it less traumatic and easier to adjust. On the other hand, if parent's mortality rates are lower, parental death may be a more unusual event than it was in different eras. That may make it a more traumatic event, meaning fewer peers will share the experience and fewer adults will have experience in dealing with children whose parents have died.

Sex. Type of loss, whether maternal, paternal, or both, as well as the sex of the subject should all be evaluated separately. Boys may be affected by death of a parent differently than girls. Studies need to match comparison groups on sex and assess the effect of loss on either sex separately. For instance, loss of mothers appears to be more important for girls under 11 years (Birtchnell, 1971, 1972) and loss of father for adolescent girls (Birtchnell, 1972; Hill, 1969). These effects may be different still for boys.

Personality. Children with preexisting emotional and behavioral problems will often develop intensified symptomatology after the parent's death, as well as subsequent new emotional difficulties. In a longitudinal study of 25 Israeli kibbutz children who lost their father during the War of 1973, Elizur and Kaffman (1983) found pathological bereavement to be associated with low self-control, hyperactivity and withdrawal-inhibition. Children with preexisting difficulties of poor impulse control, emotional lability, and explosive

rage reactions when frustrated, showed significant emotional and behavioral problems throughout the first three-and-one half years of bereavement. The withdrawn-inhibited children also reacted with marked impairment during the second and third year after bereavement. Thus a child's psychological functioning prior to bereavement influences his or her adjustment to the loss.

Geographic area and time period. Risk of mortality and risk of adult psychiatric illness can vary geographically and historically (Birtchnell, 1971; Dennehy,1966). Findings from one geographical region may not apply to other areas, and the conclusions derived from them need to be interpreted in the context of their time period.

Socioeconomic status. Socioeconomic status is another variable that may confound the relationship between childhood bereavement and depression later in adulthood. Lower socioeconomic status has been found to increase the risk of adult psychopathology (Dennehy, 1966). Parker and Manicavasagar (1986), in a study of 79 women who had experienced maternal loss in childhood, found that lower socioeconomic status was a consistent predictor of adult depression. Thus, it is a consistent predictor of depression in any population. As a result, it may be difficult to determine the specific impact of childhood bereavement on adult depression, since single parent families tend to be lower socioeconomic status than two parent families.

Parental marital status. Subjects who are illegitimate or whose parents separated when they were young, may report erroneously that the "lost" parent died (Birtchnell, 1970a). The fact that these

subjects generally tend to have a more chaotic family life may increase their risk of depression in adulthood. Thus, a spurious association between loss of a parent through death and adult depression may occur.

Previous experiences. Experiences prior to the death of a parent may also influence how the child responds to the loss. The quality of the child's relationship with the parents as well as the nature of the family dynamics should be considered. Furthermore, if the child had been repeatedly exposed to traumatic events prior to the death of the parent, this may also affect adult morbidity. Adverse experiences such as separation from parents, accidents, illness, hospitalization, frequent relocation, and lack of stimulation may influence how the child copes with the loss (Rutter, 1972). Furthermore, growing up with a parent who is mentally ill, may in and of itself influence adult morbidity. It is difficult to determine whether it is these experiences, or the death alone that predispose the child to the risk of adult depression.

Sometimes death of a parent may be beneficial. For instance if an abusive parent dies, the abused child as well as the family may experience a healthier family environment.

Subsequent experiences. Experiences after parental death also have a moderating effect on the child. Many changes may take place after a parent dies. For instance, if the father dies, the financial stability of the family may be threatened. The mother may be forced to seek employment. Changes in residence and/or schools may also take place. The surviving parent may remarry. Additional

factors such as the emotional and physical availability of the surviving parent, the stability of the family, psychiatric intervention, the nature of support systems and exposure to further losses may influence how the child copes with the death of a parent.

Thus, the research on childhood bereavement and adult depression contain multiple threats to validity. Bereavement and depression are poorly defined. Subjects tend to be selected on the basis of accessability rather than ability to adequately represent the population under investigation. Experimental and control groups are composed of inpatient, outpatient, or actuarial data and may not adequately control for confounding variables. Finally, many of the studies fail to determine the effect of variables such as parental age at the time of the child's birth, ordinal position, child's age at parent's death, sex of the deceased parent, sex of the child, personality of the child, geographical area, socioeconomic status, parental marital status, and experiences prior to and subsequent to the parent's death.

Suggestions for Future Research

Once the methodological limitations and the confounding and moderating variables are considered, it is not surprising that the findings reviewed are so inconsistent and confusing. Further research with improved methodology may clear up some of the existing confusion. Several measures can be taken to improve the quality of future research.

1. Although retrospective studies may be less time consuming and more cost efficient, the ideal situation would be to follow bereaved children into adulthood to determine what factors increase the risk for depression in adulthood. Controlled prospective studies could also show what factors differentiate those children who have a positive adjustment to a parental death from children who experience prolonged adjustment difficulties that persist into adulthood. Although prospective studies may clarify how subsequent experiences contribute to the association between childhood bereavement and later depression, they are still susceptible to confounding variables.

2. The majority of the research attempts to look at the incidence of childhood bereavement in a depressed group, rather than looking at a sample of adults bereaved as children and assessing for depression. Another way to study that association would be to measure depression in a bereaved population in comparison to a nonbereaved population.

3. In assessing depression, multiple rather than single measures can be utilized such as personality tests, projective tests, clinical interviews, behavioral observations, and physiological measures. In general, use of some objective measures along with clinical subjective measures will be valuable in comparing results across studies.

4. Rather than selecting experimental and control groups solely from inpatient, outpatient, or actuarial data, groups could be randomly selected from a variety of populations. In addition, groups could be broken down into different subcategories (i.e., married,

separated, or divorced parents). Studies which utilize random selection and block groups into specific categories when comparing bereaved to nonbereaved subjects, may further clarify how childhood bereavement affects one later in life.

5. There are several ways to control for confounding variables. One way is to construct the research design so it rules out confounding variables by matching experimental and control groups on important variables such as age, sex, socioeconomic status, and geographic region. Although matching may strengthen the internal validity of a study it can weaken the generalizability of the results. Another way is to statistically control for confounding variables by analyzing data using multiple regression or analyses of covariance.

Conclusion

Any attempt to study the long-term effects of an event such as a parental death in childhood is a monumental task. Some studies show a positive association between death of a parent in childhood and adult depression. Others are more specific according to the subtype of depression, since in some studies that do show an effect, this effect differs across the diagnostic group. Moreover, the results are inconsistent between the same diagnostic groups in different studies. Then there are those studies which have found no association between childhood bereavement and adult depression. Unfortunately, there is no definitive answer as to whether childhood bereavement results in adult depression.

While most of the findings show some association between parental death in childhood and adult depression, this might indicate that the relationship is highly specific depending on what type of loss, at what age it occurred, the sex of the subject, social class, and other variables. This conclusion implies that the negative findings failed to detect a relationship that exists. However, association does not indicate direct causation. Although an association may exist between childhood bereavement and adult depression, it cannot be concluded that the former causes the latter. The observed association could be due to sampling selection or some other confounding variables.

The opposing conclusion is that the negative findings are accurate and that there really is no relationship between childhood bereavement and risk of adult depression. The positive findings would thus be regarded as spurious, and would be explained by uncontrolled confounding variables.

An alternative explanation may be that childhood bereavement has a weak or highly specific effect upon risk of adult depression. Thus the weakness of the effect could easily be confounded by moderating and intervening variables. A specific effect (e.g., bereavement at an early age in certain conditions causes some specific types of people to become depressed in specific ways) would be easily overcome by overly broad definitions of variables. Or such an effect may be seen in a fortuitous selection of subjects. It seems that the high degree of variability within the positive, mixed and negative findings would be most consistent with this alternative

explanation. Therefore, the positive findings may be accurate, or merely spurious, while some of the negative studies may have supressed significant associations.

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